In The Claims

Please cancel Claims 7 and 19 without prejudice as follows:

1. (previously presented) A method for aligning the optical beam path of a microscope, having a light source (1), a microscope optical system, a detection stop (12), and a detection device (13), wherein the method comprises the steps of:

a) providing a center of the detection stop (12) as a first optical reference point;

b) providing a focus of the light source as a second optical reference point wherein an entire beam path is defined by said first optical reference point and said second optical reference point; and,

c) carrying out an iterative alignment of the light source until the entire beam path is aligned with respect to said first optical reference point and said second optical reference point, so that the light precisely strikes the detection stop.

2. (original) The method as defined in Claim 1, characterized in that the light source (1) is a point light source.

3. (original) The method as defined in Claim 1, characterized in that the reference points are located in planes conjugated with one another.

4. (previously presented) The method as defined in Claim 28, characterized in that the planes are Fourier planes.

5. (previously presented) The method as defined in Claim 1, characterized in that the second reference point is at a center of an objective pupil (9).

6. (previously presented) The method as defined in Claim 1, characterized in that all optical elements are aligned with respect to the reference points.

7. (cancelled)

8. (original) The method as defined in Claim 1, characterized in that the light source is displaced laterally for alignment.

9. (original) The method as defined in Claim 1, characterized in that the plane in which the light source lies is a plane corresponding to the plane of the detection stop (12).

10. (original) The method as defined in Claim 8, characterized in that the lateral displacement of the light source is accomplished by way of a lateral displacement of the illumination stop (3).

11. (original) The method as defined in Claim 1, characterized in that the microscope is a confocal microscope.

12. (previously presented) A microscope assemblage, having a light source (1), a microscope optical system, a detection device (13), a detection stop (12) defining a first optical reference point and a focus of the light source defining a second optical reference point wherein an entire beam path is defined by said first optical reference point and said second optical reference point, ~~and~~ said light source is alignable with respect to said first and second reference points, and the light source is displaceable laterally for alignment.

13. (original) The microscope assemblage as defined in Claim 12, characterized in that the light source (1) is a point light source.

14. (original) The microscope assemblage as defined in Claim 12, characterized in that the light source (1) is a laser resonator defining a resonator light bundle.

15. (previously presented) The microscope assemblage as defined in Claim 14, characterized in that the focus of the resonator light bundle of the laser resonator in the laser resonator serves as an intra-laser point light source (19).

16. (original) The microscope assemblage as defined in Claim 13, characterized in that the point light source is constituted by an extra-laser focus (18).

17. (original) The microscope assemblage as defined in Claim 16, characterized in that the extra-laser focus (18) is generated by focusing the illuminating light with a lens (2) or a hollow mirror.

18. (original) The microscope assemblage as defined in Claim 12, characterized in that the reference points are located in planes conjugated with one another.

19. (cancelled)

20. (previously presented) The microscope assemblage as defined in Claim 12, characterized in that the second optical reference point is at a center of an objective pupil (9).

21. (previously presented) The method as defined in Claim 12, characterized in that all optical elements are alignable with respect to the reference points.

22. (original) The microscope assemblage as defined in Claim 13, characterized in that the point light source is displaceable laterally for alignment.

23. (previously presented) The microscope assemblage as defined in Claim 22, characterized in that the lateral displacement of the point light source is accomplished by way of a lateral displacement of an illumination stop (3).

24. (original) The microscope assemblage as defined in Claim 16, characterized in that in the extra-laser focus (18) of the point light source defining the illuminating light beam is laterally displaced by lateral displacement of the laser together with a focusing lens.

25. (original) The microscope assemblage as defined in Claim 24, characterized in that the extra-laser focus (18) defining the illuminating light beam is laterally displaced by rotation of the laser about the pupil of the focusing lens.

26. (original) The microscope assemblage as defined in Claim 13, characterized in that for alignment, the illuminating light beam is rotated or tilted about the location of the point light source.

27. (previously presented) The microscope assemblage as defined in Claim 13, characterized in that the illuminating light beam is rotated or tilted about an illumination stop (3).

28. (previously presented) A method for aligning the optical beam path of a microscope, having a light source (1), a microscope optical system, a detection stop (12), a detection device (13), and an illumination stop (3), wherein the method comprises the steps of:

a) providing the plane of the detection stop (12) as a first optical reference plane;

b) providing the plane of the illumination stop (3) as a second reference plane wherein an entire beam path is defined as perpendicular to said first optical reference plane and said second optical reference plane and through a center of said detection stop; and,

c) carrying out an iterative alignment by adjusting the configuration of the light source until the entire beam path is perpendicular to said first optical reference plane and said second optical reference plane and through a center of said detection stop.

29. (previously presented) The method as defined in Claim 28, characterized in that all optical elements are aligned with respect to the reference planes.

30. (previously presented) A microscope assemblage, having a light source (1), a microscope optical system, a detection device (13), a detection stop (12) defining a first optical reference plane and an illumination stop (3) defining a second reference plane wherein an entire beam path is defined as perpendicular to said first optical reference plane and said second optical reference plane and through a center of said detection stop, and said light source is operatively arranged to be displaceable laterally for alignment.

31. (previously presented) The apparatus as defined in Claim 30, characterized in that all optical elements are alignable with respect to the reference planes.

32. (previously presented) The method recited in Claim 1 wherein said light source is adjusted in configuration by a lateral movement.

33. (previously presented) The method recited in Claim 1 wherein said light source is adjusted in configuration by a rotational movement.

34. (previously presented) The apparatus recited in Claim 12 wherein said light source is operatively arranged to be adjusted in configuration by a lateral movement.

35. (previously presented) The apparatus recited in Claim 12 wherein said light source is operatively arranged to be adjusted in configuration by a rotational movement.